ABSTRACT

CACAO POD EXTRACT (Theobroma Cacao. L) CYTOTOXICITY TEST ON HUMAN PERIODONTAL LIGAMENT FIBROBLAST (HPdLF) CELLS

Background: *One of ideal requirement for an irrigant is have low toxicity level, because it have possibilty extrusion to apical. Ligament periodontal cells are the major cells when exposed by endodontic material and fibroblast cell is the first line cell reacted when irrigation solution extruded to periradiculer. Cacao pod extract is known have anti oxidant, anti bacterial, and anti inflamation ability so that can be used as alternative become irrigation solution. Every new material must be tested its biocompability before used.* ***Purpose:*** *Analyzed toxicity of cacao pod extract* (*Theobroma Cacao L.)* on *Human Periodontal Ligament Fibroblast* (HPdLF) *Cells* ***Methods:*** *Primary cell culture taken from extracted premolar for orthodontic treatment reason, then cells exposed with different concentration of cacao pod extract and tested it toxicity with MTT Assay, followed by ELISA Reader.* ***Result:*** *Cacao pod extract at* $\geq$ 750 *µg/ml cause the death of > 50% cells.* ***Conclusion:*** *Cacao pod extract concentration at* $\geq$ 750 *µg/ml can not be used as an endodontic irrigant solution because it is toxic.*

Keywords: *Cytotoxicity, Human Periodontal Ligament Fibroblast Cells,Cacao Pod (Theobroma Cacao. L) Extract,* LC_{50}